

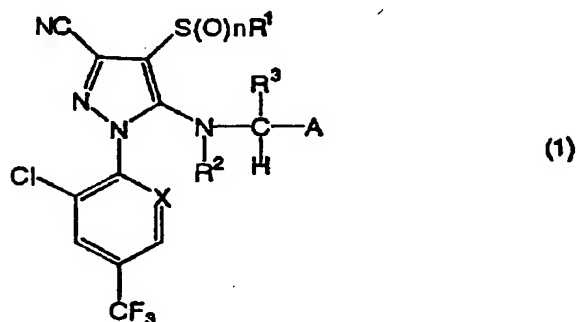
Amendments to the Claims

This listing of claims will replace all prior versions, and lisitngs, of claims in the application.

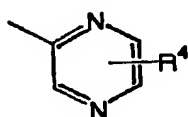
Listing of Claims:

Claims 1-20. (Canceled)

Claim 21. (New) A 1-aryl-3-cyano-5-heteroarylalkylaminopyrazole derivative represented by formula (1):



wherein group A is (A-1):



X represents N or C-halogen; R^1 represents alkyl, alkenyl, alkynyl or haloalkyl; R^2 represents hydrogen, alkyl or linear or branched alkylcarbonyl; R^3 represents hydrogen or alkyl; R^4 represents hydrogen, alkyl or halogen; and n represents 0, 1 or 2, with the proviso that R^1 is not perhaloalkyl when n is 0.

Claim 22. (New) The 1-aryl-3-cyano-5-heteroarylalkylaminopyrazole derivative

according to Claim 21, wherein R⁴ is hydrogen or alkyl.

Claim 23. (New) The 1-aryl-3-cyano-5-heteroarylalkylaminopyrazole derivative according to Claim 21, wherein R¹ is C₁₋₄-alkyl or C₁₋₄-haloalkyl.

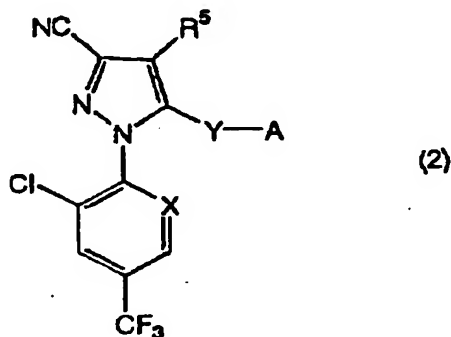
Claim 24. (New) The 1-aryl-3-cyano-5-heteroarylalkylaminopyrazole derivative according to Claim 23, wherein R¹ is C₁₋₂-haloalkyl.

Claim 25. (New) 1-(2,6-Dichloro-4-trifluoromethylphenyl)-4-fluoromethylthio-5-(pyrazin-2-ylmethylamino)pyrazole-3-carbonitrile and 1-(2,6-dichloro-4-trifluoromethylphenyl)-4-trifluoromethylsulfinyl-5-(pyrazin-2-ylmethylamino)pyrazole-3-carbonitrile.

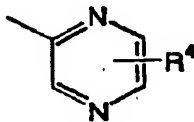
Claim 26. (New) A pest control composition, comprising:

the 1-aryl-3-cyano-5-heteroarylalkylaminopyrazole derivative according to Claim 21 with a carrier and optionally at least one auxiliary.

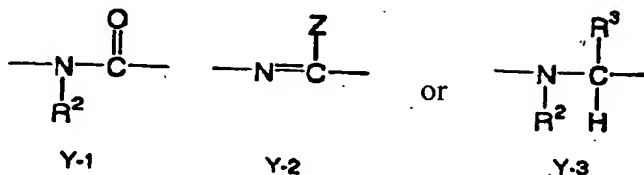
Claim 27. (New) A pyrazole derivative represented by formula (2):



wherein group A is (A-1):

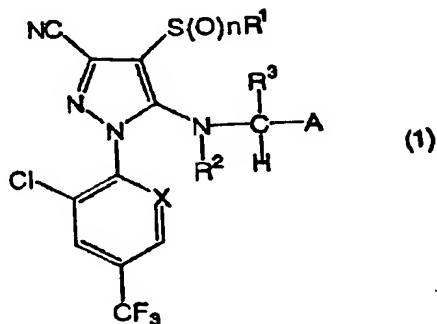


wherein bridging group Y is

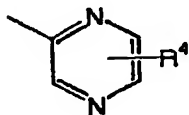


and wherein X represents N or C-halogen; R^2 represents hydrogen, alkyl or linear or branched alkylcarbonyl; R^3 represents hydrogen or alkyl and R^4 represents hydrogen, alkyl or halogen; and R^5 represents hydrogen, thiocyanato, dithio which links two pyrazole rings or mercapto and Z represents halogen.

Claim 28. (New) A process for producing a pyrazole derivative of formula (1)



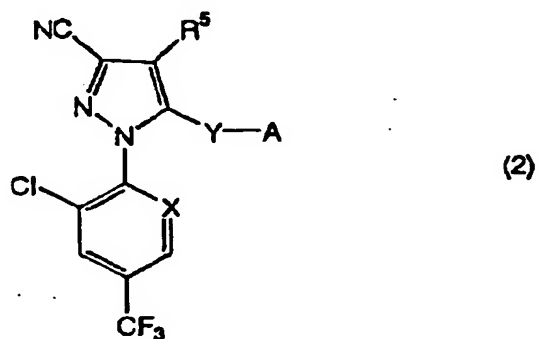
wherein group A is (A-1):



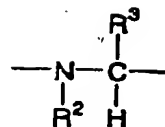
X represents N or C-halogen; R^1 represents alkyl, alkenyl, alkynyl or haloalkyl; R^2 represents hydrogen, alkyl or linear or branched alkylcarbonyl; R^3 represents hydrogen or alkyl; R^4

represents hydrogen, alkyl or halogen; and n represents 0, 1 or 2, with the proviso that R¹ is not perhaloalkyl when n is 0, which comprises:

treating a pyrazole derivative of formula (2):

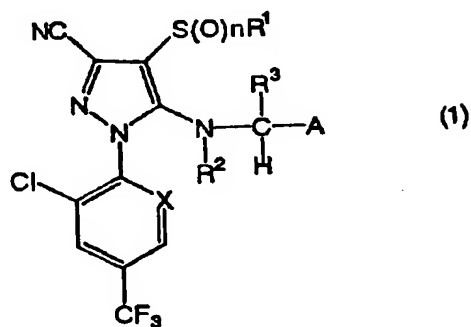


wherein A is as defined above, R⁵ is hydrogen and Y is Y-3:

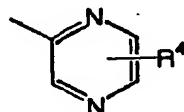


with R¹S(O)_nX¹, wherein R¹ has the same meaning as defined above, n is 0 or 1 and X¹ is chlorine or bromine.

Claim 29. (New) A process for producing a pyrazole derivative of formula (1)



wherein group A is (A-1):



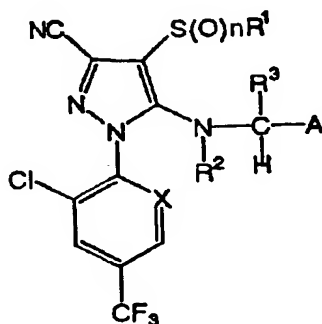
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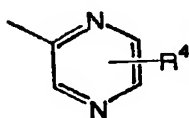
X represents N or C-halogen; R¹ represents alkyl, alkenyl, alkynyl or haloalkyl; R² represents hydrogen, alkyl or linear or branched alkylcarbonyl; R³ represents hydrogen or alkyl; R⁴ represents hydrogen, alkyl or halogen; and n represents 1 or 2, which comprises:

oxidizing the exocyclic sulfur atom on the pyrazole ring of the compound of formula (1) when n is 0.

Claim 30. (New) A process for producing a pyrazole derivative of formula (1)

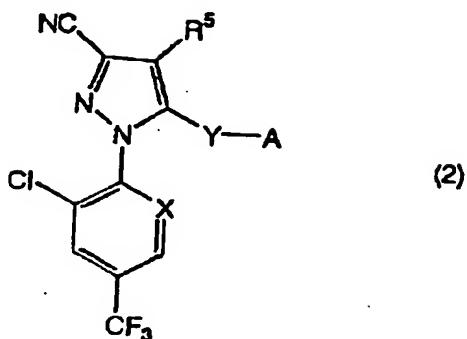


wherein group A is (A-1):

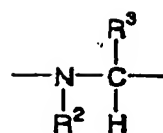


X represents N or C-halogen; R¹ represents alkyl, alkenyl, alkynyl or haloalkyl; R² represents hydrogen, alkyl or linear or branched alkylcarbonyl; R³ represents hydrogen or alkyl; R⁴ represents hydrogen, alkyl or halogen; and n represents 0, with the proviso that R¹ is not perhaloalkyl, which comprises:

treating a pyrazole derivative of formula (2):

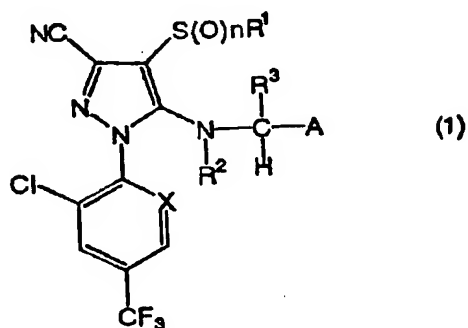


wherein A is as defined above, R⁵ is thiocyanato and Y is Y-3:

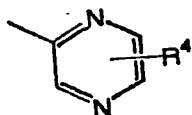


with R¹-X², wherein R¹ has the same meaning as defined above and X² represents halogen or trimethylsilyl.

Claim 31. (New) A process for producing a pyrazole derivative of formula (1)



wherein group A is (A-1):



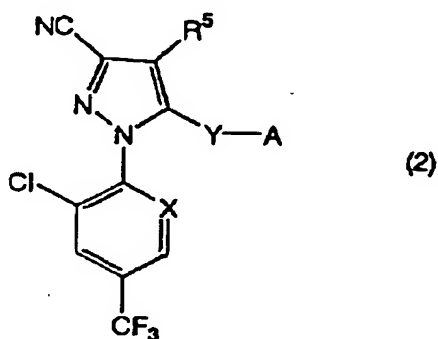
X represents N or C-halogen; R¹ represents alkyl, alkenyl, alkynyl or haloalkyl; R² represents hydrogen, alkyl or linear or branched alkylcarbonyl; R³ represents hydrogen or alkyl; R⁴

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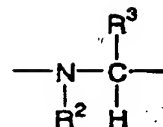
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represents hydrogen, alkyl or halogen; and n represents 0, with the proviso that R¹ is not perhaloalkyl, which comprises:

treating a pyrazole derivative of formula (2):

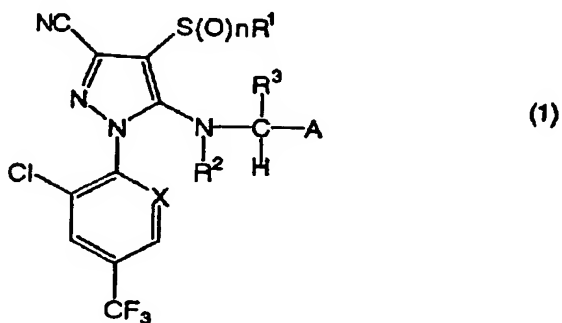


wherein A is as defined above, R⁵ is mercapto and Y is Y-3:

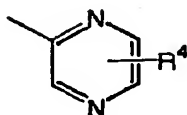


with R¹-X³, wherein R¹ has the same meaning as defined above and X³ represents halogen.

Claim 32. (New) A process for producing a pyrazole derivative of formula (1)



wherein group A is (A-1):

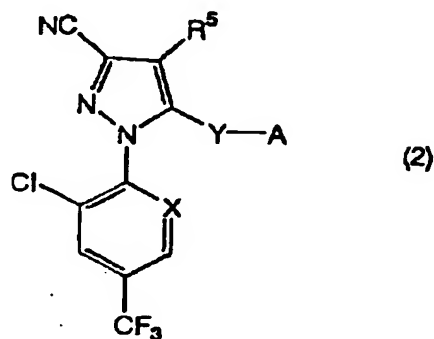


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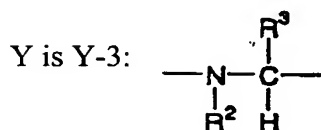
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X represents N or C-halogen; R¹ represents alkyl, alkenyl, alkynyl or haloalkyl; R² represents hydrogen, alkyl or linear or branched alkylcarbonyl; R³ represents hydrogen; R⁴ represents hydrogen, alkyl or halogen; and n represents 0, with the proviso that R¹ is not perhaloalkyl, which comprises:

treating a pyrazole derivative of formula (2):

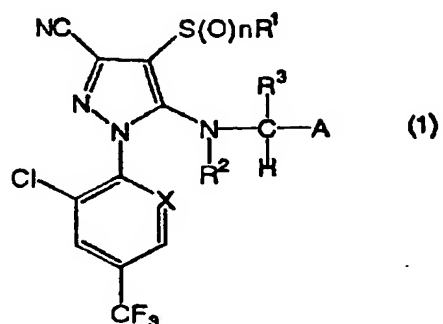


wherein A is as defined above, R⁵ is dithio which links two pyrazole rings and

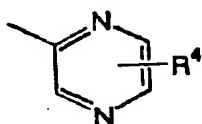


with R¹-X⁴, wherein R¹ has the same meaning as defined above and X⁴ represents halogen or SO₂M, wherein M is an alkali metal.

Claim 33. (New) A process for producing a pyrazole derivative of formula (1)

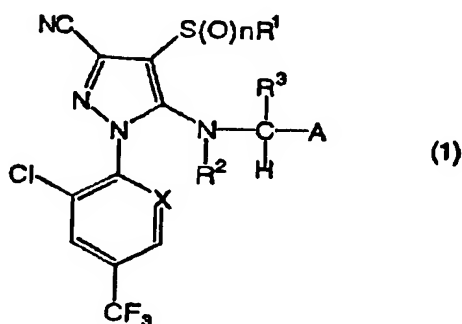


wherein group A is (A-1):



X represents N or C-halogen; R¹ represents alkyl, alkenyl, alkynyl or haloalkyl each of which bears at least one fluorine atom; R² represents hydrogen, alkyl or linear or branched alkylcarbonyl; R³ represents hydrogen or alkyl; R⁴ represents hydrogen, alkyl or halogen; and n represents 0, 1 or 2, with the proviso that R¹ is not perhaloalkyl when n is 0, which comprises:

treating a pyrazole derivative of formula (1):



wherein A is as defined above, and R¹ is an alkyl group having at least one chlorine atom or

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bromine atom, with a fluorinating agent selected from the group consisting of hydrogen fluoride, a mixture of hydrogen fluoride and an amine, and a metal fluoride.

Claim 34. (New) The process of producing the pyrazole derivative of Claim 28, wherein R¹ is haloalkyl of 1 or 2 carbon atoms.

Claim 35. (New) The process of producing the pyrazole derivative of Claim 29, wherein R¹ is haloalkyl of 1 or 2 carbon atoms.

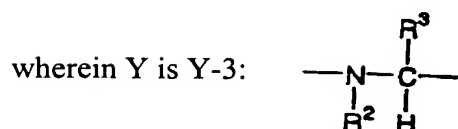
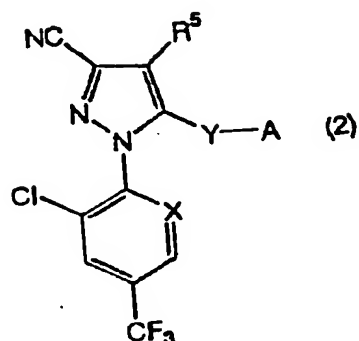
Claim 36. (New) The process of producing the pyrazole derivative of Claim 30, wherein R¹ is haloalkyl of 1 or 2 carbon atoms.

Claim 37. (New) The process of producing the pyrazole derivative of Claim 31, wherein R¹ is haloalkyl of 1 or 2 carbon atoms.

Claim 38. (New) The process of producing the pyrazole derivative of Claim 32, wherein R¹ is haloalkyl of 1 or 2 carbon atoms.

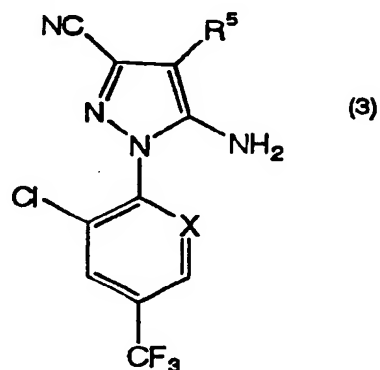
Claim 39. (New) The process of producing the pyrazole derivative of Claim 33, wherein R¹ is haloalkyl of 1 or 2 carbon atoms.

Claim 40. (New) A process for producing a pyrazole derivative of formula (2):



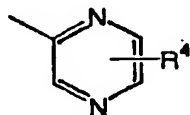
wherein R^2 is hydrogen, R^3 is hydrogen or alkyl and R^5 is hydrogen, thiocyanato, a dithio group which links two pyrazole rings or mercapto, which comprises:

treating a pyrazole derivative of formula (3):



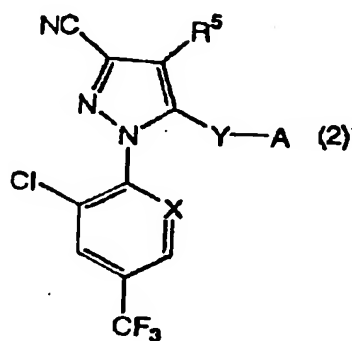
wherein X represents N or C-halogen, with a nitrogen-containing six-membered heterocyclic compound of the formula: $A-CH(-R^3)-X^5$, X^5 of which is halogen, lower alkylsulfonyloxy or arylsulfonyloxy

wherein A is (A-1):

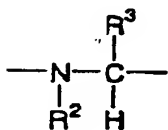


, R⁴ of which is hydrogen, alkyl or halogen.

Claim 41. (New) A process for producing a pyrazole derivative of formula (2):

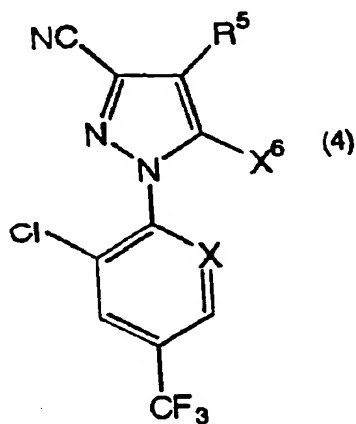


wherein Y is Y-3:

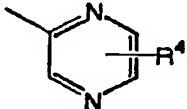


wherein R² is hydrogen and R³ is hydrogen or alkyl, which comprises:

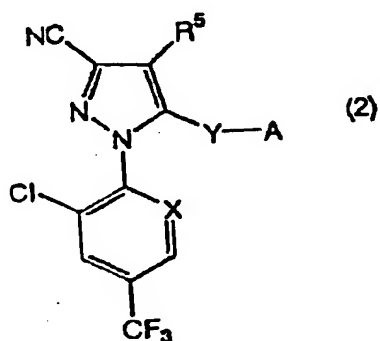
treating a pyrazole derivative of formula (4):



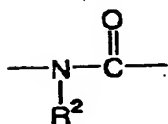
wherein X represents N or C-halogen; R^5 represents hydrogen, thiocyanato, dithio which links two pyrazole rings or mercapto and X^6 represents halogen, lower alkylsulfonyloxy or arylsulfonyloxy with a nitrogen-containing six-membered heterocyclic compound of the formula: $A-CH(-R^3)-NH_2$, wherein R^3 is as defined above,

wherein A is (A-1):  , wherein R^4 is hydrogen, alkyl or halogen.

Claim 42. (New) A process for producing a pyrazole derivative of formula (2):

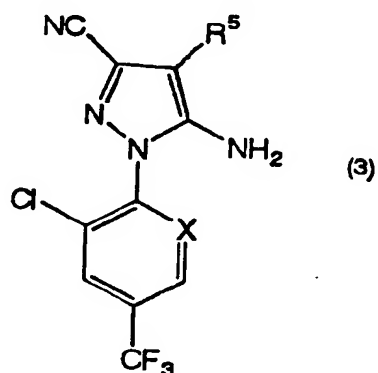


wherein Y is Y-1:



wherein R^2 is hydrogen, X is N or C-halogen, and R^5 is hydrogen, thiocyanato, a dithio group which links two pyrazole rings or mercapto, which comprises:

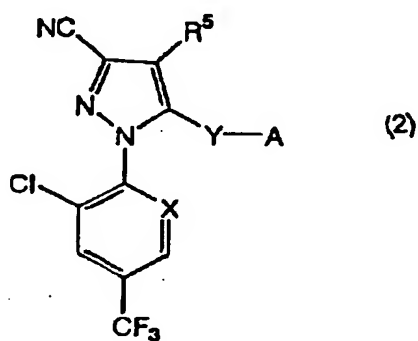
treating a pyrazole derivative of formula (3):



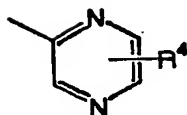
with a nitrogen-containing six-membered heterocyclic compound of the formula: $A-C(=O)-X^7$, wherein X^7 is hydroxyl, C_{1-6} -alkoxy or halogen.

wherein A is (A-1): , R^4 of which is hydrogen, alkyl or halogen.

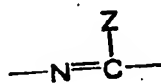
Claim 43. (New) A process for producing a pyrazole derivative of formula (2):



wherein A is



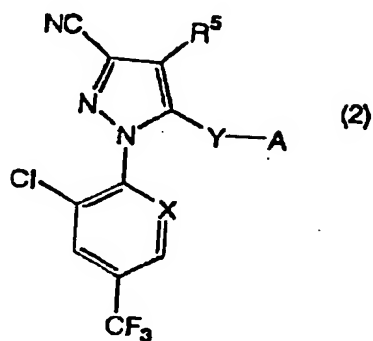
and Y is Y-2:



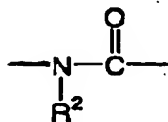
, wherein Z is chlorine or

which comprises:

treating an amide of formula (2):

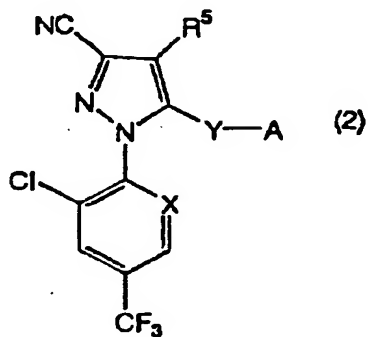


wherein Y is (Y-1):

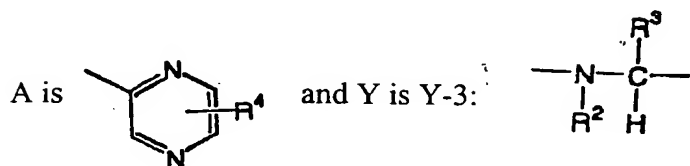


and R^2 represents hydrogen, with phosphorus pentachloride, phosphorus pentabromide, phosphorus oxychloride, phosphorus oxybromide, thionyl chloride or thionyl bromide.

Claim 44. (New) A process for producing a pyrazole derivative of formula (2):



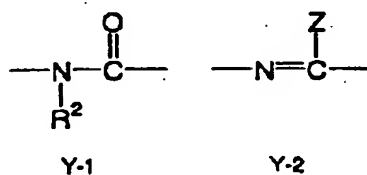
wherein R^5 is hydrogen, thiocyanato, a dithio group which links two pyrazole rings or mercapto,



wherein R^2 is hydrogen, alkyl or linear or branched alkylcarbonyl and R^3 is hydrogen, which comprises:

reducing an amide compound or a haloimide compound represented by formula (2),

wherein Y is Y-1 or Y-2



wherein R^2 is as defined above and Z is chlorine or bromine.

Claim 45. (New) The 1-aryl-3-cyano-5-heteroarylalkylaminopyrazole derivative according to Claim 21, wherein said linear or branched alkylcarbonyl is linear or branched C_{1-4} -alkylcarbonyl.

Claim 46. (New) The 1-aryl-3-cyano-5-heteroarylalkylaminopyrazole derivative according to Claim 27, wherein said linear or branched alkylcarbonyl is linear or branched C_{1-4} -alkylcarbonyl.

Claim 47. (New) The 1-aryl-3-cyano-5-heteroarylalkylaminopyrazole derivative according to Claim 28, wherein said linear or branched alkylcarbonyl is linear or branched C_{1-4} -

alkylcarbonyl.

Claim 48. (New) The 1-aryl-3-cyano-5-heteroarylalkylaminopyrazole derivative according to Claim 29, wherein said linear or branched alkylcarbonyl is linear or branched C₁₋₄-alkylcarbonyl.

Claim 49. (New) The 1-aryl-3-cyano-5-heteroarylalkylaminopyrazole derivative according to Claim 31, wherein said linear or branched alkylcarbonyl is linear or branched C₁₋₄-alkylcarbonyl.

Claim 50. (New) The 1-aryl-3-cyano-5-heteroarylalkylaminopyrazole derivative according to Claim 32, wherein said linear or branched alkylcarbonyl is linear or branched C₁₋₄-alkylcarbonyl.

Claim 51. (New) The 1-aryl-3-cyano-5-heteroarylalkylaminopyrazole derivative according to Claim 33, wherein said linear or branched alkylcarbonyl is linear or branched C₁₋₄-alkylcarbonyl.

Claim 52. (New) The 1-aryl-3-cyano-5-heteroarylalkylaminopyrazole derivative according to Claim 32, wherein said linear or branched alkylcarbonyl is linear or branched C₁₋₄-alkylcarbonyl.